

PUBLICATION NUMBER : 09235131
 PUBLICATION DATE : 09-09-97

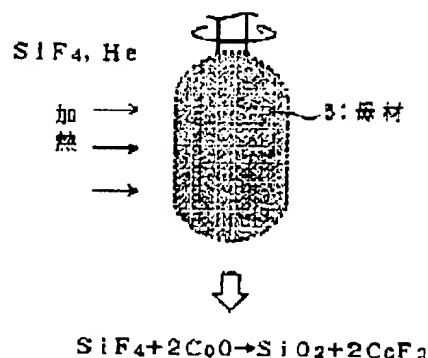
APPLICATION DATE : 01-03-96
 APPLICATION NUMBER : 08071053

APPLICANT : NIPPON TELEGR & TELEPH CORP
 <NTT>;

INVENTOR : MUTA KENICHI;

INT.CL. : C03B 20/00 C03B 8/00 C03B 37/014
 C03C 3/06 C03C 13/04 G02B 6/00
 G02B 6/00

TITLE : PRODUCTION OF TRANSPARENT
 GLASS MATERIAL FOR CO-DOPED
 OPTICAL ATTENUATOR



ABSTRACT : PROBLEM TO BE SOLVED: To obtain highly transparent glass capable of preventing crystallization even when Co is doped in high concentration by heat-treating a preform made of quartz-based porous glass to which CoO is added under He atmosphere containing SiF₄ and vitrifying the preform.

SOLUTION: A graded index type soot-like preform is produced on a quartz rod, e.g. by flame hydrolysis method and the preform is temporally sintered so as to become a specified bulk density by heating the preform by an electric oven. The preform is immersed in a methanol solution of CoCl₂·6H₂O and allowed to stand. Then, the preform is taken out and naturally dried. ~~The treated preform is heat-treated in an atmosphere in~~ which Cl₂ and He gas is made to flow. Then, further, the preform 5 is retained in the electric oven while rotating the preform 5 in the arrow direction and heated while making SiF₄ and He gas to flow to the electric oven. Thereby, a reaction represented by the figure is carried out and CoO is decreased and converted to CoF₂ to almost prevent crystallization of glass and further, the preform is heat-treated to vitrify the preform.

COPYRIGHT: (C) JPO